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ABSTRACT

This paper takes a critical look at the Commission on Reading report, "Becoming a Nation of Readers," to suggest some directions for future research. The paper analyzes some of the general statements made in the report and focuses in depth on three issues: motivation and reading, comprehension instruction, and emergent literacy. The paper argues that although "Becoming a Nation of Readers" has been hailed as the definitive statement about reading, some of the key issues are buttressed by less than conclusive evidence. One hundred and nine references are appended. (Author/MS)

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A READING RESEARCH AND EDUCATION CENTER REPORT

Technical Report No. 443

FROM PRESENT TO FUTURE: BEYOND BECOMING A NATION OF READERS

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Abstract

This paper takes a critical look at the Commission on Reading report, *Becoming a Nation of Readers*, to suggest some directions for future research. *Becoming a Nation of Readers* was written to synthesize numerous lines of research in a clear and cohesive form that could be read by the average informed citizen. Although this report has been hailed as the definitive statement about reading, some of the key issues are buttressed by less than conclusive evidence. This paper pulls apart some of the general statements made in the report and focuses in depth on three issues: motivation and reading, comprehension instruction, and emergent literacy.

FROM PRESENT TO FUTURE: BEYOND *BECOMING A NATION OF READERS*

In May of 1985, the Commission on Reading of the National Academy of Education created a document entitled *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985) as a policy statement for the instruction of reading. This paper examines the Commission on Reading report in terms of directions for research in the 1990's.

Becoming a Nation of Readers was written to report conclusions from research about reading and to make recommendations about key features of reading instruction based on these conclusions. It was not the first document of this type. In 1925, the Committee on Reading of the National Society for the Study of Education compiled a report to improve instruction in reading by providing school officers and teachers with "carefully prepared suggestions based on experimental evidence as far as possible and on expert opinion where such evidence was lacking" (Whipple, 1925). Subsequent reports, also sponsored by the Society, were published in 1937 and 1948 by scholars in the field (Henry, 1948, 1949; Whipple, 1937). And in 1975, *Toward a Literate Society* was written as the report of the Committee on Reading of the National Academy of Education (Carroll & Chall, 1975). Thus, *Becoming a Nation of Readers* is one in a long line of national reports which have sought to guide teachers, administrators, concerned parents, and legislators in making decisions about reading.

The mandate of *Becoming a Nation of Readers* was to disseminate information about reading to the public--parents, school board members, textbook publishers, test makers, and legislators--as well as to teachers and school personnel, covering issues ranging from how to teach phonics to the role of libraries in schools. Although earlier reports were aimed at influencing teachers and school officers, they were written in forms that primarily reached the academic community. In 1975, the United States Commissioner of Education had asked the National Academy of Education to address a specific set of questions. This resulted in a 351-page book outlining a national strategy for attacking the reading problem, supported by commissioned papers from experts (Carroll & Chall, 1975). In 1985, the framework for the report came from the Commission itself. This resulted in a 120-page synthesis of research written in nontechnical language for the average informed citizen. Working on any policy statement demands a broad perspective, a perspective seldom pursued in the myopic focus of research. The goal of communicating with "the man in the street" forced the Commission to synthesize numerous lines of research to create, insofar as possible, unified policy statements. Our focus in this chapter is to pull apart some of these general statements to point out directions for future research.

The Commission often discovered that it wanted to say something about certain issues but that the research available was thin, inconclusive, or nonexistent. In other areas, a great deal of information was available but the answers to a question of pedagogy or process were found to be in conflict. This produced a tension for the Commission. On the one hand, it wanted to make strong statements about key issues. On the other hand, the integrity of the report required basing these recommendations in research.

Careful reading of *Becoming a Nation of Readers* will reveal a number of places where the Commission hedged statements with phrases such as "though research does not prove the point, common sense suggests . . ." (p. 27), "though there is little hard evidence on the point . . ." (p. 67) or "In the judgement of the Commission . . ." (p. 42). These statements were purposefully inserted as clues that positions were supported by less than conclusive research evidence.

By looking in *Becoming a Nation of Readers* for statements buttressed by less than conclusive evidence, directions for future research can be found. While each section in *Becoming a Nation of Readers* contains a synthesis of numerous lines of research, any researcher who reads *Becoming a Nation of Readers* will recognize the simplification of his or her area of expertise and will see lines of research that are needed (c.f. Pflaum, Allington, & Hoffman, 1986). The task of explicating even half of the

inconclusive lines of research in the report would result in either a dictionary-sized book or a superficial and insufficient treatment of complex issues. Instead, we chose to discuss three issues in depth: motivation and reading, comprehension instruction, and emergent literacy. These three issues were chosen because we believe they are integral to the improvement of literacy, and that they are timely issues.

Motivation and Reading

In *Becoming a Nation of Readers*, the Commission identified five principles of skilled reading. One of these principles--skilled reading is a motivated process--was included because the Commission had no doubt that motivation influences reading, even though research on motivation and reading has not been pursued in great depth. Considering the importance that teachers and parents place on motivation to read, it was initially surprising to find that more research has not been done in this area. On reflection, the lack of research can be attributed to both the difficulty of studying a complex construct such as motivation and the fact that reading is an interactive skill and a multi-faceted subject in schools. There has been an upsurge of interest in the field of motivation as it relates to school tasks (Ames & Ames, 1984a; Levine & Wang, 1983; Nicholls, 1984b; Paris, Olson, & Stevenson, 1983). This work, and the abundant theory and research on reading, are presented in this section in a framework to spur future research on the connections between motivation and reading.

The primary paradigm for the study of motivation in schools has been the study of achievement motivation. This perspective focuses on individuals' motives for initiating and persisting in behavior that leads to accomplishment. Initially, achievement motivation was viewed in relation to personality traits, with the motive to achieve regarded as a relatively stable and general characteristic of an individual (Atkinson, 1964; McClelland, 1961). This view holds little encouragement for educators, for as long as motivation is viewed as a function of personality factors, the ability of educators to influence student motivation is limited.

In the 1970's, Atkinson's model was reinterpreted within a cognitive model of motivation (Weiner, 1972). Studies showed that people who differ in their level of achievement needs differ in their perceptions of the reason for success and failure (Weiner & Kukla, 1970). Furthermore, these perceptions vary as a function of the task and the way in which success or failure is defined, also known as the "evaluative setting" of the situation (Ames, 1981, 1984a, 1984b; Maehr & Braskamp, 1986; Nicholls, 1984a). Recent theoretical frameworks portray motivation as an everchanging, fluid process instead of a static system of personality traits or beliefs (Eccles & Wigfield, 1985; Maehr & Braskamp, 1986). A view of motivation that encompasses the task, the situation, and the individual is a provocative view for educators because it suggests avenues for constructive change. The variables of task, situation, and individual are already considered to be important in the process of reading (Bransford, 1979; Brown, Campione & Day, 1981; Jenkins, 1979; Pearson & Johnson, 1978). In this section the view of motivation as a fluid process underlies the analysis of each of these variables.

Individual Variables

The poor reader has been described as a passive reader (Johnston & Winograd, 1985). Poor readers often display symptoms of "learned helplessness," a persistent belief that they are unable to prevent negative outcomes or achieve positive outcomes even when conditions allow them control. They exhibit low persistence, low expectations of success, low self-concept of ability, attribute success to external unstable factors and failure to internal stable forces, and fail to use goal-oriented strategies to solve problems (Butkowsky & Willows, 1980). This passive disposition is problematic for growth in reading. Reading is the interactive process of creating meaning from print. When students approach reading passively, they are not likely to engage in the very processes needed to gather meaning from text.

Researchers are now faced with the task of identifying reasons for the passivity of poor readers and providing possible solutions. It is not clear, for example, whether this passivity is the cause of poor reading ability or an outcome. Johnston and Winograd (1985) suggest that understanding passive failure in reading is necessary to help students who are poor readers. This makes sense if lack of motivation is seen as a cause of poor reading. Stanovich (1986), however, argues that an initial deficit in an important skill, such as decoding, creates an ever-widening gap between good and poor readers, with academic and motivational consequences.

Most probably, passivity toward reading is both a cause and an effect. Perceptions of ability and the goals students adopt are central in predicting patterns of behavior (Dweck & Leggett, 1988). In an analysis of under- and over-achievers in reading, Oka and Paris (1987) suggest that students respond to their self perceptions, attitudes and skills in a manner that preserves self-worth. Passive responses may be adaptive for certain students who find little value in reading activities, lack specific skills and believe success is beyond their reach. In fact, manipulating perceived ability by giving prior negative feedback can lead otherwise average fifth graders to display the same negative affect, attributional patterns, and strategy deterioration that is characteristic of learned helpless behavior (Elliot & Dweck, 1988).

On the other hand, overachievers in fifth grade are distinguished by their feelings of self-competence and an awareness of how to best use their skills (Oka & Paris, 1987). But even good readers are not always enthusiastic about the activity called reading in school (Durkin, 1982). And students who can read well do not necessarily do so. Studies indicate that most children spend little, if any, time reading on their own (Anderson, Wilson, & Fielding, 1988). Passivity is not the only factor related to motivation to read. Individual variables, such as passivity, need to be examined in relation to other mediating factors to explain motivation and reading.

The Task

Most adults respond differently to different reading tasks. For most people, the motivation to read an introductory statistics text is very different than the motivation to read the latest novel on the best sellers' list. Motivation to do a task can be related to the value an individual places on that particular task. Eccles and Wigfield (1985) have split the value attached to a task into three variables: attainment value, interest value, and utility value. Looking at the value attached to various reading tasks can help clarify the influence of a task on the motivation process.

The attainment value of a task is the value attached to trying to do the task well to affirm self-concept, or to fulfill achievement, power, or social needs. For many children, part of the motivation to perform well on school reading tasks could be mediated by the attainment value attached to the act of reading. Reading is a highly valued skill in middle American society. A child might want to read to prove that he or she is a competent person in the eyes of others, to please his or her parents, or to gain some sense of independence. The converse of this idea is that poor readers might feel that the effort expended is too great in comparison to the value of attaining the skill of reading. This could be a particularly insightful way to view socioeconomic, gender and ethnic group differences. Wigfield and Asher (1984) note that middle-class children, especially girls, are more likely to value reading as an important skill. In subcultures where reading is not as highly valued, children might be less motivated to work hard in order to read well. In addition, if the attainment of reading skill is tied to self-concept, students may adopt self-defeating strategies to preserve self-worth (Covington, 1984; Nicholls & Miller, 1984).

Eccles and Wigfield (1985) define the enjoyment one receives from doing a task as the interest value of the task. Numerous studies have demonstrated the powerful effect of interest on reading comprehension (Asher, 1979, 1980; Asher, Hymel, & Wigfield, 1978; Asher & Markell, 1974;). Until recently, these results were viewed with some reservation due to the failure to separate interest from the critical factor of prior knowledge. Recently, however, Baldwin, Peleg-Bruckner, and McClintock

(1985) demonstrated that the interest in the topic being read contributes to reading comprehension beyond the contribution of prior knowledge.

Interest in a topic needs to be differentiated from the elements of writing that capture a reader's interest. There are some elements of a story or text that seem to make passages more interesting than others to large groups of readers. Stylistic differences or differences in themes or outcomes have been found to contribute to reading motivation and comprehension. For instance, interest ratings for sentences, especially those containing novel ideas or themes that the students could identify with, contributed as much to comprehension as the ratings for readability (Anderson, Shirey, Wilson, & Fielding, 1986). Students were much more likely to remember sentences like "The huge gorilla smashed the school bus with his fist" than "The fat waitress poured coffee into the cup." Jose and Brewer's (1984) work suggests developmental differences in children's liking of suspense stories. Younger children were found to prefer stories with happy endings, regardless of the character disposition ("good" or "bad"); older students preferred endings in which good characters were rewarded and bad characters were punished. A line of study should systematically investigate factors contributing to interest across different genres and age levels.

Although adults usually know the most about topics that interest them, students have been found to know quite a bit about topics which do not hold their interest (Baldwin, Peleg-Bruckner, & McClintock, 1985). Their motivation to learn about these topics may have been derived from the perceived utility value of the task. According to Eccles and Wigfield (1985), the utility value of the task is its usefulness in helping the student achieve his or her long- or short-term goals. For example, one goal of reading might be to find out how to do something, such as learning how to cook something by reading a recipe or figuring out how to assemble a model airplane by reading directions. The utility value of reading directions would be high and students would be motivated to read them if they wanted to complete the model.

Studies have shown that students who understand the usefulness, or utility value, of strategies in reading are more likely to apply those strategies on their own (Paris & Jacobs, 1984). Telling students why they should use particular strategies is one way of pointing out the utility value of those strategies in the goal of understanding what they read. However, the goal, in this case better comprehension, must be personally regarded as significant or useful if it is to be pursued in the absence of external directives or incentives (Paris, Lipson, & Wixson, 1983). A goal, such as completing a worksheet, set by a teacher in class may be seen by some class members as a useless or unimportant activity. Other students may look at the usefulness of doing their worksheets well in order to get good grades.

Students often do not see the usefulness of tasks they are asked to do in reading (L. Anderson, 1984). Perhaps restructuring tasks to enhance the perceived utility of the task could help students make sense of their assignments and come to regard them as personally significant. Research indicates that even subtle changes in utility value, such as writing a letter to a specific person other than the teacher, result in differences in the amount and quality of participation (Greenlee, Hiebert, Bridge, & Winograd, 1986). The utility value of activities could be increased by creating legitimate purposes for activities. Writing to create a school newspaper, or to advertise books for friends instead of completing the conventional book report, could be useful activities that increase student motivation to participate fully in the classroom.

The most profitable research stance would be to study the three task mediators--attainment value, interest value, and utility value--in relation to one another. The values placed on different tasks, such as reading silently or doing workbooks, could vary from high to low on all three dimensions. Questions for researchers to consider are the relative importance of the three variables, the effects of changing the value of one factor on students' accomplishment of the task, and the nature of individual or developmental differences in perception of task value. It seems reasonable to expect a developmental interaction with the three task mediators. A young student might focus on the attainment value of reading tasks because smart people read and he or she wants to be a smart person. Older children,

especially those who can do the mechanics of reading, might be motivated by the interestingness or the utility of their school reading tasks. Looking at task values and the interaction of these values should provide interesting instructional insights into motivation for various reading tasks.

The Evaluative Context

Reading activities in school can occur under various conditions, or contexts, that might mediate students' motivation to read. The typical classroom has a strongly evaluative atmosphere in which rewards are based on academic performance (Levine, 1983). Research on the effect of evaluative systems suggests that competitive situations in which students' skills are evaluated against one another are debilitating for at least some students because they place students in an ego-involved, threatening, self-focused state rather than a task-oriented, effort, or strategy-focused state (Ames, 1984a, 1984b; Covington, 1984; Nicholls, 1984a). The tendency in a competitive situation is to focus on performance judgments and assessment of ability as compared to others. Cooperative situations or situations in which only an individual is involved have been found to be more conducive to goals of learning and mastery (Ames, 1981, 1984a; Ames & Ames, 1981). For example, Elliott and Dweck (in press) found that highly anxious children used appropriate strategies and attributions under non-evaluative conditions but as soon as evaluative pressure heightened, these same children focused on personal inadequacies, performance deficiencies, and irrelevant aspects of the task.

Much of school reading instruction seems to occur within an evaluative context that could best be characterized as competitive. The conventional reading group format fosters competition rather than cooperation, with comparisons and evaluations made when children read orally or answer questions. The result of competitive or cooperative contexts on reading motivation requires research attention. One aspect of particular instructional importance is the affect of competitive/external reward systems on intrinsic motivation to read. Studies have shown that when external rewards are given for a task that began as intrinsically motivating for students, engagement in that task drops off after the reward is taken away (Lepper, 1983). Yet, in an effort to encourage free reading in schools, many schools and organizations have initiated programs to give away free pizzas, gold stars, and other incentives to readers.

The study of the other mediators of motivation--task and personal characteristics--within the context of the overall evaluative setting is essential. Limited research supports the need for examining complex relationships between these three mediators. Hiebert, Winograd and Danner (1984), for example, found that students' attributions for their success and failure differed when they were in a personal situation reading for meaning from when they were in a public situation being evaluated for their reading. Investigation of the evaluative context and how it interacts with student and task variables is, like the entire topic of motivation, a promising, indeed, necessary area of study of the 1990's.

Comprehension

Recent studies have provided much information about effective comprehension instruction (see Tierney & Cunningham, 1984, for a review), and this research was quoted approvingly in *Becoming a Nation of Readers*. Nonetheless, comprehension and the teaching of comprehension are complex matters and the research needs to be extended in several different ways. In this section, we will discuss three of these ways.

A first major issue is the limits of direct instruction. In direct instruction, the teacher explicitly explains, defines, informs, leads, and models. One of the achievements of the last decade of reading research has been to show that direct or explicit instruction works well (Duffy, 1981; Rosenshine & Stevens, 1984). Considering the frailty of educational research methods, the evidence of effectiveness is impressive in breadth and in depth. It comes from both naturalistic and experimental studies. It covers word identification (Becker & Gersten, 1982; Bradley & Bryant, 1983) as well as aspects of comprehension, such as understanding story structure (Fitzgerald & Spiegel, 1983), finding main ideas

(Baumann, 1984), summarizing (Hare & Borchardt, 1984), reading critically (Patching, Kameenui, Carnine, Gersten, & Colvin, 1983), and reading strategically (Paris, Cross, & Lipson, 1984).

A problem is that the meaning of the term direct instruction is embarrassingly elastic. It is used not only to refer specifically to instruction in which the teacher provides explicit explanations, but often seems to include any purposeful, active, concentrated, systematic instruction. For instance, Palincsar and Brown (1984) characterize their very successful technique, reciprocal teaching, as direct instruction. Yet, in this technique the students take turns playing the teacher, so there are long stretches during lessons when the real teacher has a responsive role. Au and her colleagues (Au, Tharp, Crowell, Jordan, Speidel, & Calkins, 1985) describe the approach to the teaching of reading used in the highly regarded Kamehameha Early Education Program as direct instruction. Yet, a close look at the lessons of KEEP teachers will show that they are masters of indirection; they seldom explain, define, inform, or model. KEEP teachers do not even control turn taking; during guided reading lessons children speak up when they have something to contribute without even raising their hands (Au & Mason, 1981).

The real question, then, is just what it is about so-called direct instruction that makes it effective. Narrowing the question somewhat, research is needed to figure out what skills, concepts, and strategies benefit from direct instruction, in the precise sense.

Research is also needed to determine whether there are any hidden costs of direct instruction. From the student's perspective, perhaps there is an optimal amount of hearing about a task and a point beyond which the talk is redundant and doing the task on one's own becomes the better way. Differences among students at different age or ability levels may condition the effectiveness of direct instruction. While less able students may be responsive to this kind of instruction, common sense, at least, suggests that more advanced students may become bored with instruction they regard as redundant and obvious. Moreover, direct instruction places students in a passive, receptive role. Is it possible that a constant diet of direct instruction will interfere with the development of a propensity for active, independent thinking?

The direct instruction motto seems to be, "Tell as much as possible." We are bold enough to suggest that research eventually will show that what may seem to be the opposite motto is the better guide for teachers: "Tell as little as possible." By this we mean that students should be left to make any discovery that they can and will figure out for themselves.

Previous research specifically investigating learning by discovery has proved inconclusive. However, the previous research has had serious weaknesses (Shulman & Keislar, 1966). Several other sorts of evidence suggest that people do learn better when they must work out some aspects of a task for themselves.

From basic research on human learning comes the finding that people consistently learn more when they generate responses or answers to questions (Slamecka & Graff, 1978). To illustrate, Anderson, Goldberg, and Hidde (1971) had college students read aloud highly predictable sentences in which there was a blank in place of the last word, such as *Women carry lots of junk in their* _____. Students who generated the words to complete the blanks were able to recall more sentences than students who read whole sentences, such as *Women carry lots of junk in their purses*. Determining the word that fits in a predictable sentence is a modest discovery at best; however, related research shows the benefits of generating answers when the task is more difficult (Auble, Franks, & Soraci, 1979) or even impossible (Kane & Anderson, 1978).

From applied research on classroom instruction comes the conclusion that students learn more when the teacher does not give away the answers to questions or too quickly provide help when a student is faltering. For instance, in a study of reading lessons in 20 first-grade classrooms, Anderson, Evertson, and Brophy (1979) found that growth in reading is positively related to the teacher's providing

sustaining feedback--furnishing hints to help children come up with a satisfactory response on their own, but negatively related to the teacher's giving terminal feedback--telling children the correct response or allowing other children to call out the response. In a study of reading lessons in 22 second-grade lessons, which examined in great detail types of oral reading errors, the nature of teachers' feedback, and children's reactions following errors and feedback, Hoffman and his colleagues (Hoffman et al., 1984) confirmed that terminal feedback is negatively related to year-to-year growth in reading.

There is research that suggests the value of allowing students to work things out on their own, to the extent that they can, and encouraging discoveries rather than always teaching by telling. This research has barely scratched the surface, though. We call for research during the next decade on indirect instruction that has the scope and penetration of the research on direct instruction completed during the past decade.

The second set of issues in comprehension concerns the concept of background knowledge. Research establishes that the fund of knowledge a reader already possesses is a critical determiner of comprehension (Anderson & Pearson, 1984). But exactly what significance this fact has for instruction is far from obvious. Superficially compelling appeals to background knowledge can be made on both sides of several arguments. For instance, one could argue that basal readers should concentrate on familiar topics because these will be readily comprehended. At the same time, with seemingly equal force, one could argue that basal readers should concentrate on unfamiliar topics so as to develop new knowledge.

Becoming a Nation of Readers warned against jumping on the background knowledge bandwagon before the instructional entailments of the concept are clear. Studies should look for instructionally-optimal activities to develop appropriate background when students lack prior knowledge. Questions concerning what kinds of topics require activities to develop background knowledge and what types of students need these activities should be answered. Teachers are concerned about activating background knowledge without "giving away" the plot of a story. Is this a valid concern? If the students know the theme, will they be less motivated to read the story? How do teachers decide what to activate in the first place? Studies should look at the effects of activating knowledge relevant to different aspects of a story on the comprehension and motivation of students.

According to schema theory, the essence of knowledge is its organization or structure. Basic research establishes the benefits of possessing a structured body of knowledge as opposed to a basket of facts (see Anderson & Pearson, 1984, pp. 263-264). As a practical matter, however, not enough is known about the value of techniques that are supposed to help students see the structure of a topic.

One such technique is semantic mapping--that is, drawing diagrams to show how the aspects of a topic are related (Armbruster & Anderson, 1980). Research on semantic mapping and related techniques has yielded promising results (Holley & Dansereau, 1984). A limitation is that most of the research has been done with college students trying to learn difficult, technical material, and the students have been required to employ elaborate systems for semantic mapping, systems which are themselves difficult to learn and tedious and time consuming to use. These systems would be daunting for children in the elementary grades.

Informal, discussion-based use of semantic mapping, probably inspired by Johnson and Pearson (1978), is increasingly seen in elementary school reading lessons around the country, but casual observation suggests wide variation in the extent to which the structure of a topic actually gets highlighted in these lessons. More research is needed to determine whether such simplified versions of semantic mapping do help elementary children grasp the structure of ideas implicit in texts (see Berkowitz, 1986; Darch, Carnine, & Kameenui, 1986).

The third issue that we will touch on in this section is vocabulary growth and development. Durkin's (1978-79) finding that reading teachers spend alarmingly little time providing comprehension instruction is well known to both scholars and practitioners in the field of reading. Less often quoted is the finding from the same study that less than 5% of reading lesson time is devoted to vocabulary instruction. Durkin's finding is entirely consistent with those of others. According to Graves (1986), authorities who have observed vocabulary instruction in the schools generally agree that it "lacks purpose, breadth, and depth" (p. 78).

Counterbalancing this dismal appraisal is the feeling among vocabulary researchers that, after a long fallow period, the study of vocabulary is undergoing a renaissance. Thanks to recent research, there are now for the first time good, although still provisional, answers to several basic questions about vocabulary: What is a word? How important is word knowledge to comprehension? How many words do children of different ages know? Where do children learn the words they know?

Based on a reanalysis of the major studies of vocabulary size, Nagy and Herman (1987) conclude that the average child in the 3rd through the 12th grade learns about 3,000 new words a year. This compares with the 300 new words a year that Jenkins and Dixon (1983) estimate are taught in the typical reading program. And, the word "taught" must be used advisedly; it would be more accurate to say that most of these words are introduced rather than taught.

Therefore, most of the new words a child learns are not learned from direct instruction. Most new words are learned, instead, it appears, from natural contexts while a child is reading or listening (Nagy, Anderson, & Herman, 1987).

Is there any point to direct vocabulary instruction, then? We see two possible purposes: The first is to help students with the difficult words that will be needed to understand a particular selection or series of selections. The second is to help children become better independent word learners.

With respect to the first goal, until just a few years ago research evidence was equivocal as to whether teaching word meanings even aided comprehension. Now there is a growing body of evidence that teaching difficult vocabulary can help (Beck, Perfetti, & McKeown, 1982; Kameenui, Carnine, & Freschi, 1982; Stahl, 1983; Wixson, 1986). The resulting gains in comprehension are modest, it should be cautioned, and producing these gains requires instruction that is more intensive and systematic than is typically seen in reading programs. The light introduction to unfamiliar words that is typical of reading instruction may sensitize students to these words and increase the odds that the students will learn the words on their own while reading the selection (see Jenkins, Stein, & Wysocki, 1984), but educational research methods are too crude to easily prove a proposition of this subtlety.

With respect to the second goal, helping children become better independent word learners, we believe that eventually it will be possible to prove that this is the *sin qua non* of vocabulary instruction. It could not be proved at the present time, however. The conventional wisdom of the field is that children will be helped to acquire vocabulary if they are taught to use context clues and to analyze words into parts. Basically, there is no sound evidence that either practice does any good (see Graves, 1986; Johnson & Baumann, 1984).

The first step in devising instruction to assist children in becoming independent word learners is to reconceptualize the task. The goal is for children to develop a fulsome word schema--in other words, rich, general knowledge about the form, function, and meaning of words. A word schema should be distinguished from a content, or topical, schema, although, of course, at the boundaries the two types blend together. We'll not try to develop the concept of a word schema very far in this paper. A good start has been made by Graves (1987) in a recent paper in which he discusses 16 kinds of knowledge children ought to possess about words (e.g., learning that words may have various meanings, learning to recognize and use figurative language).

The more a person knows about words, the greater the likelihood that he or she will be able to appreciate an additional nuance of meaning of an already partially known word, or learn something about the meaning of an entirely unknown word. Discussions of word meanings in reading circles usually focus on context or morphology. Without wishing to suggest that these aspects are unimportant, less often talked about is the deep knowledge that a true word expert will have about semantics--that is, the nature of word meanings.

For instance, a word expert will not only know a great many verbs for characterizing motion, but also will tacitly know, at least, the set of distinctions that may be conveyed by a verb of motion (see Miller, 1972). The word expert will know that verbs of motion can be categorized according to whether the movement is across land (gallops, toddles, marches), through the air (flies, soars, swoops), or through water (swims, rows, wades). He or she will know that verbs of motion often mark direction, such as toward or away from the speaker (come, go; bring, take), around (turn, rotate, spin), or up (rise, climb, mount). He or she will know that verbs of motion sometimes indicate whether the movement is fast (races, scurries, sprints) or slow (ambles, creeps, saunters). It should be obvious that a word expert can readily place a new, previously unfamiliar verb of motion within this framework of concepts.

The general point is that sophisticated users of the language have word schemas, or highly developed systems of concepts about words, that probably permit substantial and often rapid learning of word meanings from small amounts of contextual information. We venture the guess that children can be helped to become word experts--not so much by didactic instruction on context, morphology, and semantics--but by a process of bringing to consciousness, sharpening, and then extending tacit knowledge they already possess about words. The reference source for such instruction will more often be the thesaurus than the dictionary.

In summary, research covering direct and indirect instruction, examination of the concept of background knowledge as it is translated into classroom practice, and understanding of how students become independent word learners should advance the applicability of comprehension research for practitioners. These research extensions of current comprehension research present the challenge in this area for the next few decades.

Emerging Literacy

The way that researchers look at and interpret the early reading and writing of children has undergone a dramatic shift in perspective over the past decade. The field of early language development, now called "emergent literacy," departs from the reading readiness view which dominated early reading instruction for over half a century. In a reading readiness perspective, children were trained to read by focusing on visual and auditory discrimination, including the recognition and discrimination of colors, shapes, sounds and letters. In an emergent literacy perspective, the emphasis on training has been replaced by a stress on the environment in which early literacy activities occur. The domain of emergent literacy includes everything a child does relating to written language--from interaction with story books and identifying words on street signs to scribbling as a form of writing. Unlike the reading readiness perspective that focused on children's activities in kindergarten or first grade, researchers of emergent literacy study the development of literacy from infancy through the preschool years.

Taking the emergent literacy perspective, the chapter in *Becoming a Nation of Readers* called "Emerging Literacy" began with a discussion of the roots of children's literacy in the home. The chapter then described kindergarten programs that build on children's emergent literacy and the nature of formal beginning reading instruction. In this respect, *Becoming a Nation of Readers* went beyond the scope of most emergent literacy research, as most research in this domain has been limited to development that occurs prior to formal school instruction (Teale, 1986).

This limitation of emergent literacy research to activities prior to formal instruction has meant that the emergent literacy research has had little impact on the majority of materials and methods used in

kindergarten reading instruction (Hiebert & McWhorter, 1987). Instead of using the growing body of research on what children know about literacy when they enter school, most formal reading programs retain a reading readiness perspective. With the push from parents and administrators for earlier reading instruction, the need for integrating concepts and findings from emergent literacy with classroom or other instructional settings is urgent, especially when the children being taught have not had extensive literacy experiences in their home.

Attempts to examine how emergent literacy activities relate to current programs in beginning reading have produced mixed results. For instance, a child's concept of print has been found to predict success with some measures of reading achievement and not others (Huba & Kontos 1985; Huba & Robinson, 1987; Huba, Robinson, & Kontos, 1986). In general, a strong relationship between measures of emergent literacy and scores on initial reading tests has not been found. Researchers in the field of emergent literacy argue that this lack of a relationship is not surprising because current instruction does little to accommodate emergent literacy and standard assessments do not usually include aspects of emergent literacy. However, the failure to establish consistent strong relationships between measures of emergent literacy and performance on tests of beginning reading may also be due to the poor psychometric characteristics of many of the emergent literacy measures. Most of the studies of emergent literacy examine children's performances on measures that researchers have designed. Information on the validity or reliability of the measures is rarely provided. Another explanation is that measures of emerging literacy, although interesting, do not account for much variance in learning to read. Or, perhaps the abilities tapped by measures of emerging literacy do not show up in the initial stages of learning to read but gain importance as children learn to apply literacy skills in real-world settings or in comprehension tasks (Mason, in press).

Instead of trying to fit emergent literacy ideas into current programs, some researchers have been redesigning programs so that elements of emergent literacy research are integrated into formal reading instruction. Although this idea is not new--"whole language" approaches have been in place for years--little information is available on the effectiveness of the different components of these programs. Current data is limited but Teale, Schickedanz and others (Martinez, & Teale, 1987; Schickedanz, 1986) are in the process of documenting the nature and effectiveness of programs which use the perspective of children as emerging in literacy skills.

At question is whether techniques that work well in home environments, usually with one-to-one dyads, can still work in a classroom when the adult-child ratio increases by a factor of 6, 12, or 25. Recent reviews of emergent literacy stress that parents transmit concepts of literacy through interactions with their children (Mason & Allen, 1986; Teale, 1986). Undocumented is whether this type of transmission is effective with larger groups of children. In larger groups, the quality as well as the number of opportunities a child has to question content, or even ask what a particular word means, can be lost while the teacher tries to keep 20 five-year-olds from squirming and poking each other.

Another issue in applying emergent literacy ideas, regardless of whether those ideas are adopted in current programs or are the basis for redesigning programs, relates to the adaptations necessary for children with different levels or knowledge about literacy. Studies of emergent literacy have frequently sampled middle-class children whose literacy experiences are rich and abundant. Unfortunately, large groups of children come to school with a limited literacy base. It seems reasonable to expect that these children might require a different type of program than children who have been read to every night and who know their ABCs. What constitutes appropriate instruction for some children may be far beyond the capabilities of others. To implement programs that apply the emergent literacy perspective, teachers require much more information than now exists on ways to accommodate the wide range of literacy knowledge evident in the typical kindergarten or first grade classroom.

Teachers also require information on the relationship of phonics instruction to emergent literacy research. Among researchers of emergent literacy, knowledge about letter sound relationships has often been disregarded in favor of other aspects of literacy such as story book orientation and

environmental print recognition. Teale recognizes this lack of attention, noting that the issues related to phonics are often swept under the rug "out of fear that attention to them will only increase the tendency toward isolated skills and drills on sounds, letters, and words in early literacy programs" (1986, p. 36). However, studies that have traced children's development of emergent literacy concepts and knowledge of language forms, such as letter-naming and auditory discrimination, suggest that knowledge of the forms develops concurrently with or even precedes concepts of print (Hiebert, 1981; Hiebert, Cioffi, & Antonak, 1984; Lomax & McGee, 1987).

A likely explanation for children's acquisition of letter naming and auditory discrimination early on is that parents teach these skills, since many parents see themselves as responsible for teaching their children letter names before kindergarten entry. Whole language advocates have argued that the necessary knowledge to identify words in text comes as a result of natural experiences with written language (Goodman & Goodman, 1979; Harste, Burke, & Woodward, 1982). Whether this knowledge is acquired without direct attention from parents or teachers is not clear (Masonheimer, Drum, & Ehri, 1985; Scott & Ehri, 1987). By ignoring the issue of how to teach children about letter sound relationships, researchers in the area of emergent literacy have abandoned just that area that causes teachers the most concern. It is little wonder that teachers resort to older, readiness type materials when they have nothing concrete to fill that gap.

The phonics section in *Becoming a Nation of Readers* remains controversial because of the narrow and one-sided interpretations it has received (cf. Goodman, 1985; Zeigler, 1985). Although the Commission said that phonics is one of the essential ingredients in teaching children to read words, they also stated that "no matter how children are introduced to words, very early in the program they should have experience with reading these words in meaningful texts" (p. 43) and that "a high proportion of the words in the earliest selections should conform to the phonics they have already been taught" (p. 47). To advance knowledge of the relationship of phonics and reading for meaning in beginning reading, it seems beneficial to set aside what appears to be a false dichotomy: There is no reason why phonics cannot be taught within an emergent literacy perspective. Studies which document effective programs, where writing is introduced in kindergarten, where environment print that is phonetically regular is used to teach words, and where children read phonetically regular meaningful print should be pursued. Research is needed which integrates the best of programs which emphasize phonics and programs which emphasize whole language or emergent literacy concepts.

We believe that the emergent literacy perspective ought to be having more influence on beginning reading programs. For this to happen, administrators and policy makers must be provided with the kind of evidence which convinces them that this is a worthwhile perspective. Unless researchers studying emergent literacy overcome their distaste for quantitative research, their influence will remain ethereal.

Concluding Remarks

In this paper, we have attempted to explicate some research questions that deserve the attention of researchers in the next few years. We have discussed three fields in reading research. The issues we covered are obviously only a small subset of the issues included in *Becoming a Nation of Readers*. In addition to providing a focus for the areas discussed in this chapter, we hope that a larger purpose has been served. To date over 225,000 copies of *Becoming a Nation of Readers* have been sold. It has been hailed as the definitive statement about reading and dubbed the "Surgeon General's report on reading." Some people seemed to think that, with the report, research had resolved all the important issues in reading. The reality is far different. The agonizing process of trying to give clear, unequivocal answers to the questions addressed in *Becoming a Nation of Readers* has made us more aware of how much remains to be learned.

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